



# The Safety Corner



From the Marine Corps Center for Lessons Learned  
September 26, 2006

## Materials Handling Equipment Safety

This issue of the Safety Corner highlights lessons and observations about Materials Handling Equipment during operations in the War on Terror.

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### From the Director:

Materials handling is not an inherently dangerous activity and we should not make it one. There are enough hazards in Iraq without creating more. In "The Sands of Iwo Jima", Sgt Stryker, explains, "A lot of guys make mistakes. . . We make a mistake, and some guys don't walk away". That quote is as true today as it was in World War II. Many of us read about Marines that are killed or maimed by their own carelessness or by that of another. Mistakes are part of everyday life, but making mistakes because of stupidity or negligence is unforgivable. As the world's best war fighting organization, we cannot accept that type of behavior. Ensure you are doing your part to reduce the risk and carelessness.

**VEHICLE PARKING:** One area that needs awareness raised on is the parking of vehicles and movement of vehicles in close proximity to other vehicles and personnel. A recent incident resulted in a Soldier attached to the MEF having his foot fractured due to a vehicle moving forward abruptly and rear ending the vehicle in front of it as they started to move out on a patrol. Casual factors could have been vehicles closely parked together, personnel sitting/standing between vehicles as they are readied for movement, and improper operation of the vehicle that "moved forward abruptly". Risk mitigation could be simply allowing for greater separation between vehicles, don't stand or sit between vehicles, ensuring your drivers are trained, ensuring your drivers are aware of the risk, and most importantly - supervise.

Stay disciplined; focus on your training; review your parking plan in garrison and deployed: don't try to set forklift speed records; and remember another quote from John Wayne: "Life is tough, but it's tougher when you're stupid."

I look forward to your comments, observations, and concerns. "Bravo Zulu" to 2ndLt Forrest of CLB-7 for setting up the "Safety Spotter" program to identify and mitigate risks on the spot. I use her concept daily in my normal course of being a Marine. See page two for the lesson she submitted.

Semper Fidelis,

Col Monte Dunard, Director MCCLL

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### Materials Handling Equipment (MHE)

The expeditionary nature of the Marine Corps requires our equipment to be loaded into a container or onto a vehicle. The key to moving this equipment successfully is the use of MHE. Whether it is a pallet jack in a supply warehouse, a forklift at an ammo dump, or a RTCH (Rough Terrain Container Handler) moving containers off a ship, all have inherent risks that need to be addressed on a regular basis to help mitigate hazards.

Each forklift operator has many responsibilities whenever he or she is engaged in picking up and moving a load. It is easy to become complacent from routine operations. This is why training is an important part of any safety program. Training should include initial hands on experience, encompassing each element of forklift operation. Refresher training is also necessary to deter bad habits and to reiterate important situations that might have been forgotten by the casual forklift operator.

Working with a forklift requires constant attention to the hazards in front, above and around the area of operation. Despite one's best intentions there is always a possibility for accidents to occur.

OSHA reports tens of thousands of injuries related to powered industrial trucks (PIT), or forklifts, in U.S. workplaces each year. Many employees are injured when lift trucks are inadvertently driven off loading docks, fall between docks and unsecured trailers, or when they fall while on elevated pallets and tines. Most incidents also involve property damage, including damage to overhead sprinklers, racking, pipes, walls, and machinery. Unfortunately, most employee injuries and property damage can be attributed to lack of safe operating procedures, lack of safety-rule enforcement, and insufficient or inadequate training.



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### Safety Tip

While every step must be taken to minimize the chance of a forklift incident, Marines need to be aware of what to do should they be involved in one. When a forklift is traveling around a corner or down a slope, forces are developed that affect the *Center of Gravity* of the forklift and can result in it rolling sideways, or tipping forwards or backwards.

When a forklift overturns, **the safest place for the operator is in the cabin with a seatbelt on.** If body restraints have been fitted they should be worn. The operator is advised to hold on, stay with the truck and lean in the opposite direction of the overturn. You are at a greater risk of being seriously injured or killed if you attempt to jump from a falling forklift. While seatbelts can be a nuisance, they can also be a life saver.

### Safety Spotters.

LESSON ID: 41608

2ndLt Rachael Forrest with CLB-7, observed numerous incidents and mishaps across MNF-W resulting from a lack of safety awareness and supervision. Numerous mishaps and injured personnel result from Marines not utilizing proper safety precautions (e.g. not wearing hard hats, utilizing improper eye protection, and general misuse of other types of PPE).

Based on these observations, 2ndLt Forrest implemented a Safety Spotter Program within CLB-7 where a Marine is designated specifically for identifying safety concerns. The Safety Spotter's sole purpose is to assist the unit safety officer by monitoring a designated work area and provide on the spot correction of any unsafe work practices. Safety spotters need to be aware of the possible safety issues prior to being assigned to the position. This was accomplished through periods of instruction and guidance from the Safety Officer on potential hazards. Furthermore, Safety Spotters are held accountable for improper supervision of a work site.

The Safety Spotter is held accountable for a failure to stop and correct unsafe work practices. Complacency can lead to safety mishaps, and an increase of injured personnel.

### Ordnance does not have a forklift that will fit in and out of the above ground magazines.

LESSON ID: 41624

While assigned to Marine Aviation Logistics Squadron 16, Maj Thomas Lenhardt observed how to take full advantage of the space and Net Explosive Weight (NEW) limits provided in our above ground magazines.

MALS requires a diesel forklift which meets the standards for use in ammunition and explosive magazines. Currently we are limited to stacking items only as high as can be managed with a pallet jack. Ammunition has to be moved by the pallet jack out of the magazine and then un-stacked by forklift. Once the necessary items have been removed it is then restacked by the forklift and moved back into the magazine by hand. This is not only time consuming but causes large delays in our ability to support the squadrons and our ability to properly store ordnance. Each unnecessary step required to obtain ammunition from magazines only increases the chance of experiencing a mishap. Any mishap involving ammunition or explosives is potentially catastrophic.

Approval should be granted for the purchase of 2 forklifts that meet the specifications for use in ammunition and explosive storage magazines. These should meet the specific safety requirements to include diesel engine class, spark arrestors, heat reduction equipment for the exhaust, etc. The forklift needs to be able to enter all ammunition and explosives magazines.

A forklift would allow MALS to use the full floor area and height of the magazines, providing more protected storage for the explosive items. This would reduce the number of items degraded by weather and excessive handling. This also would provide for safer storage due to lightning protection and grounding requirements which would reduce the potential for damage. In the event of an accident, there is a greater degree of protection provided by the above ground magazines.

Last week's issue of the Safety Corner on Weapons Handling and Negligent Discharges referenced the Marine Corps Ground Mishap Investigation and Reporting Manual as P5102.1A. The Marine Corps Ground Mishap Investigation and Reporting Manual is P5102.1B. Requirements for the message format is found in Chapter 5 of the manual.

The observations and recommendations contained in The Marine Corps Center for Lessons Learned (MCCLL) Safety Corner represent the considered judgment of Marines who have identified safety issues in their units. The purpose of this newsletter is to apprise other Marines of these safety recommendations and to encourage them to enter their own lessons into the Marine Corps Lessons Management System (LMS).



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### Safety Tips

While we depend on forklifts to help us support missions, we must also use common (and safety) sense to protect us from mishaps and injuries. All Marines have a role in forklift safety. Remaining mishap-free demands a conscious daily effort on the part of everyone. Never attempt to operate a forklift unless you have been trained and authorized to do so.

- Read and understand the owner's manual.
- Understand the characteristics/operation/limitations of your forklift.
- Know the hazards that are present during forklift operation.
- Be aware of obstacles, both ahead and overhead.
- Perform a Pre-Op safety check of the forklift.
- Always wear your seat belt.
- Never attempt to jump from a falling or tipping forklift. Know what to do if your forklift tips over.
- Take your time – Do Not Speed!!
- Be aware of your surroundings and the path your are going to travel. Use a ground guide to ensure your path is clear.
- If you can't see over the load, drive in reverse. Do not reverse up an incline. Raising the load to see under it is not a safe practice. The forklift becomes unstable.
- A forklift isn't a scaffold or a taxi: don't lift or transport people on the forks or on pallets on the forks. Use an approved work platform.
- Ensure loads are stacked properly and secure on forks before moving
- Transport the load as close to ground as possible to reduce the chance of a roll over.

While operators suffer the most fatalities, most injuries resulting from forklift accidents are suffered by pedestrians and co-workers. The most common forklift injuries result from pedestrians being run over by the truck or being struck by its load. As a pedestrian, always be aware of the presence of forklifts in the area and keep a safe working distance from them at all times.

*Always drive the forklift safely: with your safety and the safety of others in mind.*



As Marines get comfortable with a job and repetition sets in on their daily tasks, some tend to get complacent and overconfident in their ability. I am sure the young motivator at left was making great time not having to wait on a ground guide while moving cargo.

The trouble with any forklift is the decreased visibility and the large blind spots created by the forklift and the cargo. An operator of an armored cab has even less visibility. A ground guide could have easily spotted the vehicle and taken action by guiding the operator around the vehicle and/or tell the owner of the vehicle to park elsewhere. In addition to ground guides it is a good practice to designate parking and restrict vehicle and pedestrian traffic in area where forklifts are in operation.

This operator will have plenty of time to think about what he did while the investigation is underway. He is fortunate there was no one in the vehicle when he went over it.

*Photo is from the Naval Safety Center and is credited to an Air Force Ground Safety Officer serving in Afghanistan*